

To Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Maternal and Child Health Package Services Among Adolescent Girls in Selected Rural Areas, Bangalore

Noorjan K.S.^{1*}, K. Ramu², Sukanya³

Abstract

Background: The maternal and child health package services are directed toward mothers and children in order to attain total wellbeing of the child within the framework of the family and community. Every aspect of community health programs in India has marked effects on the health and welfare of expectant mothers. **Objectives:** To assess the existing knowledge, to develop and administer structured teaching program, to assess the effectiveness of structured teaching programs and to determine the association between knowledge score and the selected demographic variables regarding maternal and child health package services. **Materials and Methodology:** The research approach is evaluative approach; the research design is quasi experimental one group pretest and post-test design and the settings selected are rural areas. The sample of this study is 80 adolescent girls. Nonprobability convenient sampling technique was used to draw the sample for the study. The tool used was structured knowledge questionnaire. Collected data was analysed through descriptive and inferential statistics. **Results:** In the present study, post-test mean knowledge score was found higher (71.25%) when compared with pretest mean knowledge score (20.42%). The pretest mean knowledge score is 8.58, with a mean percentage of 20.42% and a standard deviation of 5.87. The enhancement is 50.83%, and the statistical paired t-test value is 21.85. Findings shows that there was a significant improvement in the knowledge on maternal and child health package services at 0.05 levels. The statistical paired 't' test indicates that enhancement in the mean knowledge score found to be significant at 5% level for all the aspects under study. **Interpretation and Conclusion:** Over all findings showed that STP was significant in improving the knowledge scores of adolescent girls on maternal and child health package services. The results revealed that the teaching program will enable and empower the adolescent girls with adequate knowledge.

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INTRODUCTION

Maternal and child health (MCH) is not merely the population control. It is a broad program covering the health and welfare of the family, particularly the mother and child. Women and child are more vulnerable section of the society. It is, therefore, vital to improve their health and wellbeing to achieve the complete development of over all human resource. MCH is not a new speciality, it is a method of delivering health care to special group in the population which is

vulnerable to disease, disability, or death [1].

The MCH services encompass the curative, preventive and social aspects of obstetrics, paediatrics, family welfare, nutrition, child development, and health education of parents and children, the ultimate objective of MCH services is lifelong health [2].

Promotion of MCH has been one of the most important objectives of family welfare program in India. The MCH services are to continually focus and work on the expansion and integration of the department so that individuals, either for themselves that leads to healthier pregnancies, or healthier infants and children in the future. In the last decades, the life expectancy of the population in India has shown remarkable important from 41 years at birth in 1962 to the current day of 65 years. Yet over 1,00,000 women in India continue to die of pregnancy related causes every year. The maternal mortality ratio in India is 407 per 1,00,000 live births. The figures are way behind India's Millenium Development Goals which call for a reduction to 109 by 2015, according to UNICEF. India is still among high Infant Mortality Rate countries (54 in the year 2007). Infant Mortality Rate has decline slowly from 204 for many years and then declined a bit again to 114 in 1980 and coming down to 54 in the year 2007 [3–6].

The MCH care will vary according to the demographic, social, and economic patterns. Factors such as urbanization, rural migration, changing patterns of women's work, and status have far-reaching effects on childbearing. It is now generally accepted that the MCH services should always be flexible and based on, and adapted to the local needs and resources of the community it serves, they should be moulded to the local traditions, cultures and other environmental characteristics and cannot be modelled on patterns copied from other countries [1].

India has one of the largest populations of married adolescent girls in the world. In fact, one half of 20–24-year-old females were married by age 18, and close to a quarter of 20–24-year-old females were married before their 15th birthday. Several social and economic disadvantages are associated with early marriage. Married girls in India typically have low levels of educational attainment, limited or even absent peer networks, restricted mobility and less access to mass media than boys or unmarried girls or married adult women [1].

In addition to these social disadvantages, girls who are married inevitably, and often promptly may face key reproductive health events. Most are regularly sexually active, and most are under pressure to have a first child. The evidence suggests that significant proportion of adolescents over one in five – give birth by age 17, the age below which obstetric risk appear to be particularly elevated. Yet married adolescents aged 18 or younger in India are significantly less likely than women aged 19–23 to use skilled delivery, or to fully minimize their children [4].

A study was conducted on the development of MCH care services and programs in India. Multiple deficiencies are identified in the current health system, with large gaps existing between service providers and beneficiaries [7]. Women's health education, integrated MCH care and education, the family welfare program, quality of care, international efforts, demand generation, health worker knowledge and skills, information, education and communication, health institutions image, logistics for care, management information systems, the top-down approach, and coordination are discussed in considering alternate approaches to providing care. Central to obtaining stronger MCH services is the need for professionals to increase their knowledge and skills, and advocate giving priority attention to women's health and childcare [8].

MCH services are integrated approach for the care of mothers, newborn and children. It includes essential evidenced based interventions likely to improve MCH survival and nutrition. It aims to coordinate all existing efforts and resources of MCH and further for PHC services. It is a phased

approach which is built on the existing structure which focuses on improving the delivery system [5].

MATERIAL AND METHODS

The present study was conducted in a selected rural area Bengaluru. The sample consists of 80 adolescent girls. Non-purpose sampling technique was adapted for the selection of samples. Those subjects who were in the age group of 13–18 years, who were available at the time of data collection and who knows to speak Kannada and English were included in the study. The subjects who were below 18 years and above 18 years of age, who were not willing to participate in the study and who are mentally retarded were not included in the study.

Quasi experimental one group pretest posttest design was selected to assess the effectiveness of structured teaching program on knowledge regarding MCH Care Package services among the adolescent girls. The tool for data collection was divided into two sections. Section 1 – Questionnaire to elicit the baseline data and Section 2 – Structured knowledge questionnaire on MCH package services. Ethical clearance for the study was obtained by the institutional ethical review committee. Oral and written consent were obtained from the study samples. The subjects were informed that the confidentiality of the data will be maintained.

The pilot study was conducted in the rural areas in a selected area, eight samples were selected for the pilot study and those were not included in the main study. Pretest questionnaire was administered using structured knowledge questionnaire. The structured teaching program was conducted on the same day. The posttest was carried out on the 7th day by the same structured knowledge questionnaire for evaluating the effectiveness of the STP on MCH Care Package services among the adolescent girls. The data was analyzed by descriptive statistics such as mean, mean percentage, and standard deviation and by inferential statistics such as paired 't' test and chi-square test (χ^2) test.

The investigator collected the data from selected samples. The purpose of the study was to explain self-introduction given by the investigator to the subjects. The investigator assured confidentiality of the responses, and the data was collected. Written consent was obtained from the subjects to participate in the study.

Pretest was conducted by self-administered was conducted by self-administered structured questionnaire. The samples were instructed to attend to the tool carefully and give appropriate answers to them according to their knowledge level. On an average, participants took 30 minutes to fill in the data. On the same day after the pretest, a structured teaching program was given to the subjects to assess the knowledge regarding MCH package services. Posttest was conducted with the same questionnaire on the 7th day. A good rapport was maintained throughout the data collection procedure. The investigator found no difficulty during the data collection.

RESULTS

Analysis for the present study was done by using mean, mean percentage, standard deviation, and chi-square test to assess the demographic data, pretest, and posttest knowledge score of all the subjects participated in the study.

Section A: Description of Demographic Variables

Data obtained on demographic variables are analyzed using descriptive statistics and summarized in terms of frequency and percentage. It is described under the headings of age, religion, educational status, family income, type of family, marital status, and food habits. This section deals with the frequency of subject in each demographic variable along with their respective percentages (Table 1).

Based on the age, majority of respondents 26 (32.5%) were in the age group of 13–14 years, 28 (35%) were in the age group of 15–16 years, and 26 (32.5%) were in the age group of 17–18 years. Percentage distribution of adolescent girls in relation to religion shows the majority 58 (72.5%) were

Table 1. Distribution of adolescent girls according to socio demographic variables by frequency and percentage.

S.N.	Demographic Variables	Frequency	Frequency Percentage
1.	<i>Age in years</i>		
	a. 13–14	26	32.5%
	b. 15–16	28	35%
	c. 17–18	26	32.5%
2.	<i>Religion</i>		
	a. Hindu	58	72.5%
	b. Muslim	6	7.5%
	c. Christian	8	10%
	d. Others	8	10%
3.	<i>Educational status</i>		
	a. Illiterate	0	0%
	b. Informal education	2	2.5%
	b. Primary	21	26.25%
	c. Secondary	23	28.75%
	d. PUC	25	31.25%
	e. Degree	9	11.25%
4.	<i>Family income</i>		
	a. ≤1000	4	5%
	b. 1001 to 3000	19	23.75%
	c. 3001 to 5000	30	37.5%
	d. 5001 and above	27	33.75%
5.	<i>Type of family</i>		
	a. Nuclear	31	38.75%
	b. Joint	29	36.25%
	c. Extended	14	17.5%
	d. Single parent family	6	7.5%
6.	<i>Marital status</i>		
	a. Married	12	15%
	b. Unmarried	68	85%
7.	<i>Food habits</i>		
	a. Vegetarian	32	40%
	b. Non-vegetarian	48	60%
8.	<i>Have you attended any programs on Maternal and Child Health Package Services</i>		
	a. Yes	8	10%
	b. No	72	90%
9.	<i>Source of information</i>		
	a. Self-reading articles or journals or books	45	56.25%
	b. Mass media- TV or radio	35	43.75%

Hindus, 7.5% were Muslims, 8 (10%) were Christians, and 8 (10%) were others. Regarding educational status majority 31.25% were of PUC 23 (28.75%) were secondary education, 21 (26.25%) were having a primary education, 9 (11.25%) were degree, and 2 (2.5%) were in informal education. In relation to the income status, majority 30 (37.5%) of adolescent girls belonged to the income range 3001–5000, while a minority 4 (5%) of adolescent girls belong to the range of ≤1000, 27 (33.75%) recorded the range of 5001 and above and (23.75%) recorded the range of 1001–3000. Type of family shows that 68 (85%) are married and 12 (15%) are unmarried. Regarding food habits, 48 (60%) of

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respondents were nonvegetarian and 32 (40%) were vegetarian. Majority 72 (90%) of adolescent girls have not attended any programs on MCH package services. Regarding the source of information majority 45 (56.25%) getting information through self-reading articles or journals or books and 35 (43.75%) were getting through mass media such as TV or Radio (Figures 1–9).

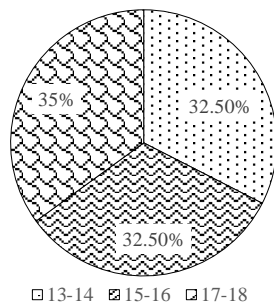


Figure 1. Distribution of adolescent girls according to age.

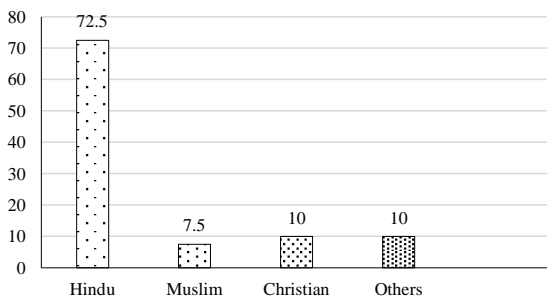


Figure 2. Distribution of adolescent girls according to religion.

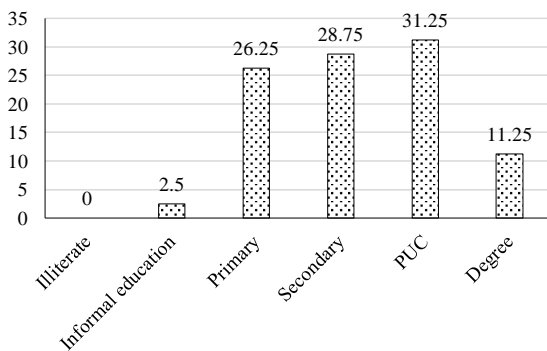


Figure 3. Distribution of adolescent girls according to educational status.

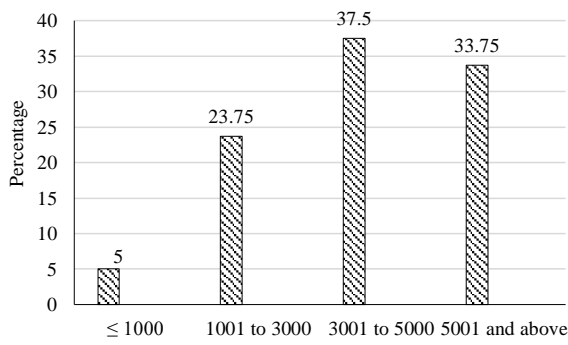


Figure 4. Distribution of adolescent girls according to family income.

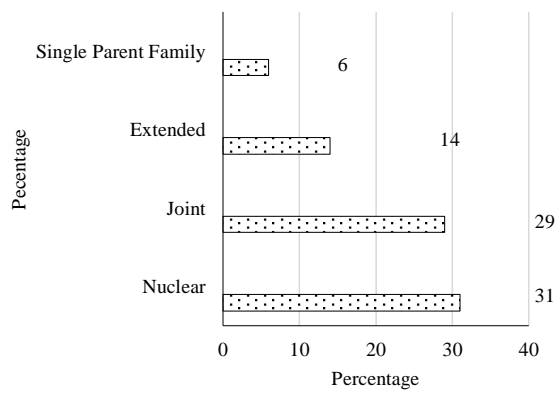


Figure 5. Distribution of adolescent girls according to type of family.

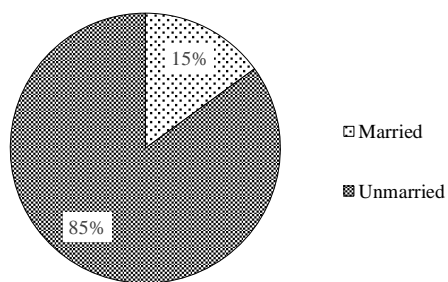


Figure 6. Distribution of adolescent girls according to the marital status.

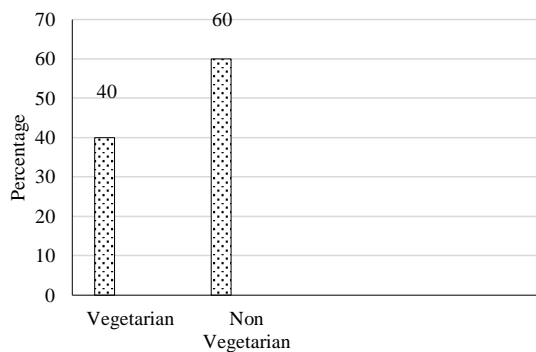


Figure 7. Distribution of adolescent girls according to food habits.

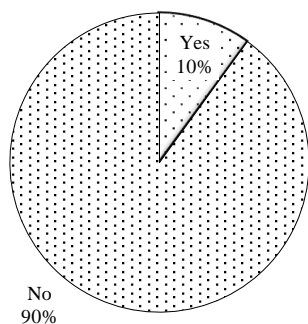


Figure 8. Distribution of adolescent girls who have attended and not attended any program on MCH package services.

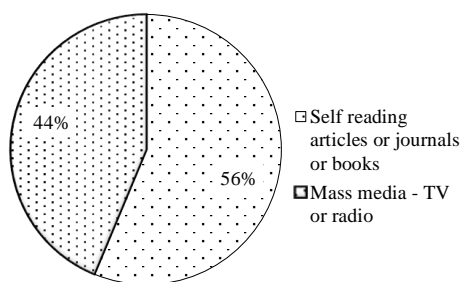


Figure 9. Distribution of adolescent girls according to source of infection.

Section B: Pretest Level of Knowledge Regarding MCH Package Services

Table 2 and Figure 10 show that out of 80 respondents, 11 (13.75%) had moderate knowledge and 69 (86.25%) had inadequate knowledge and none of the adolescent girls got adequate knowledge in pretest.

Table 2. Pretest knowledge level regarding MCH package services.

S.N.	Knowledge Level	Frequency	Percentage
1.	Inadequate	69	86.25%
2.	Moderately adequate	11	13.75%
3.	Adequate	0	0%

Table 3. Mean, mean percentage, and standard deviation.

S.N.	Range	Maximum Score	Mean	Mean %	Standard Deviation
1.	2-25	42	8.58	20.42%	7.098

Table 3 and Figure 11 show that over all pretest knowledge was found to be 20.42% with the standard deviation of 7.098.

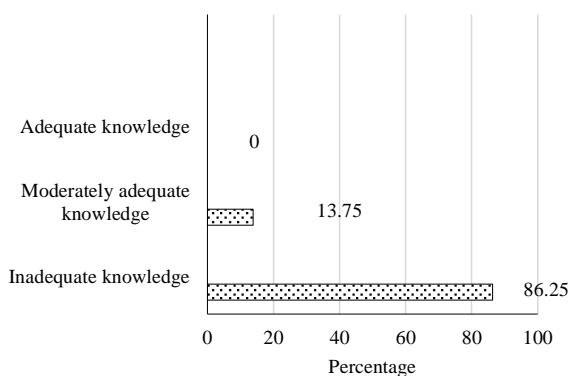


Figure 10. Distribution of adolescent girls according to the pretest knowledge score.

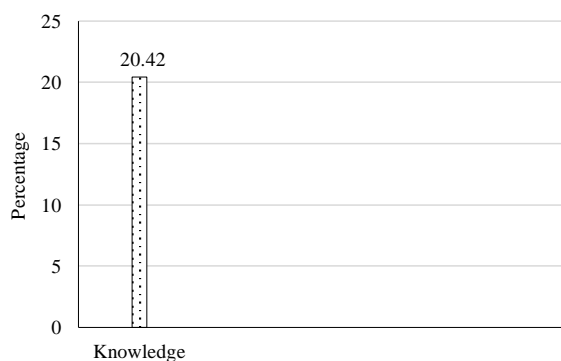


Figure 11. Mean percentage of knowledge of subjects before STP.

Section C: Post-test Knowledge Level Regarding MCH Package Services

Table 4 and Figure 12 show the post-test knowledge score for out of 80 adolescent girls, majority of 52 (65%) of subjects had adequate knowledge, 28 (35%) had moderate knowledge and none of the respondents had inadequate knowledge.

Table 4. Post-test knowledge score regarding MCH package services.

S.N.	Knowledge Level	Frequency	Percentage
1.	Inadequate	0	0 %
2.	Moderately adequate	28	35 %
3.	Adequate	52	65 %

Table 5. Mean, mean percentage, and standard deviation of knowledge regarding MCH package services after STP.

S.N.	Range	Maximum Score	Mean	Mean %	Standard Deviation
1.	22–39.	42	29.93	71.25%	5.87

Table 5 and Figure 13 indicate that overall post-test mean knowledge was found to be 71.25% with the standard deviation of 5.87.

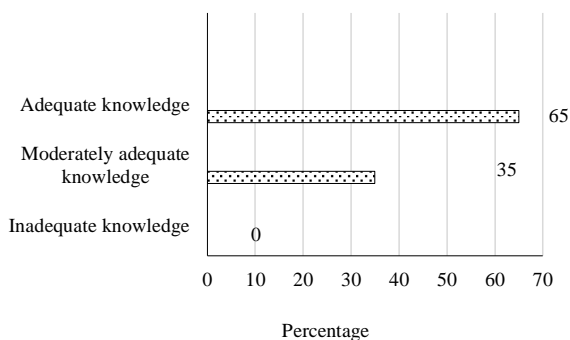


Figure 12. Distribution of adolescent girls according to knowledge score after STP.

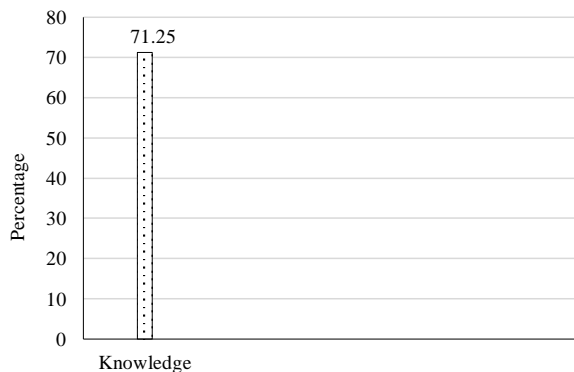


Figure 13. Mean percentage of knowledge score after STP.

Section D: Analysis of Effectiveness of STP on Knowledge Regarding MCH Package Services

Table 6 and Figure 14 reveal that majority of the respondents (86.25%) had an inadequate level of knowledge and (13.75%) had a moderate level of knowledge in pretest. Majority of the respondents had an adequate level of knowledge (65%) and (35%) had moderate level of knowledge in post-test which implies the effectiveness of structured teaching program.

Table 6. Distribution of adolescent girls according to the level of knowledge regarding MCH package services before and after STP.

S.N.	Level of Knowledge	Before STP		After STP	
		Number	%	Number	%
1.	Inadequate knowledge.	69	86.25	–	–
2.	Moderately adequate knowledge.	11	13.75	28	35
3.	Adequate knowledge.	–	–	52	65
4.	Overall.	80	100	80	100

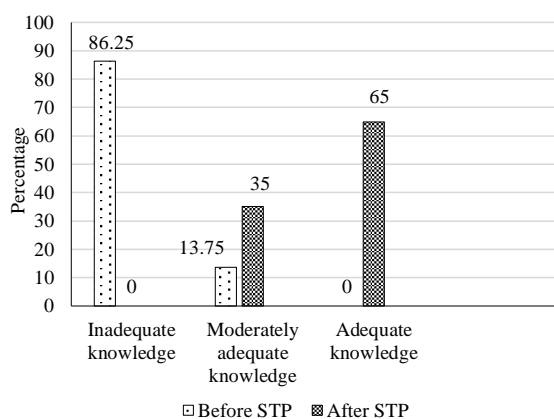


Figure 14. Distribution of adolescent girls according to knowledge regarding MCH package services before and after STP.

Section E: Overall Comparison of Pretest and Post-test Mean Knowledge Level of Adolescent Girls Regarding MCH Package Services

Table 7 and Figure 15 depict the mean, mean percentage, and standard deviation of knowledge before and after STP among adolescent girls. The range before STP lies between 2–25. The mean value before STP was 8.58. The SD before STP is noticed as 7.098 and the mean percentage is found to be 20.42%. The range after STP is 22–39. The mean value after STP is 29.39. The SD after STP is found to be 5.87 and the mean percentage as noticed to be 71.25%.

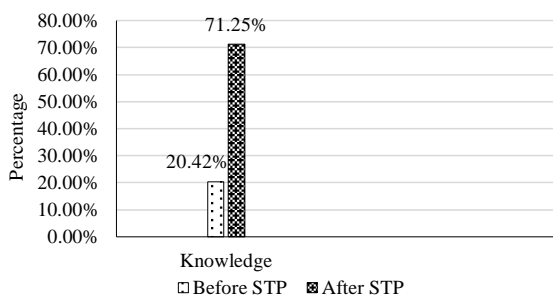


Figure 15. Mean percentage of knowledge regarding MCH package services among adolescent girls before and after STP.

Table 7. Mean, range, and SD of knowledge level of adolescent girls regarding MCH package services before and after STP.

S.N.	Variable	Max. Score	Before STP				After STP			
			Range	Mean	SD	Mean %	Range	Mean	SD	Mean %
1.	Knowledge.	42	2-25	8.58	7.098	20.42%	22-39	29.93	5.87	71.25%

Table 8 and Figure 16 show the enhancement of knowledge and significant on MCH package services among adolescent girls before and after STP. The mean difference is 21.35 and mean percentage is 50.83%, the t value is 21.85 and p-value is $p \leq 0.001$.

Table 8. Enhancement of knowledge and significant on MCH package services among adolescent girls before and after STP.

S.N.	Variable	Maximum Score	Mean Difference	Mean Percentage	t- Value	p-Value
1.	Knowledge	42	21.35	50.83	21.85	$p < 0.001$

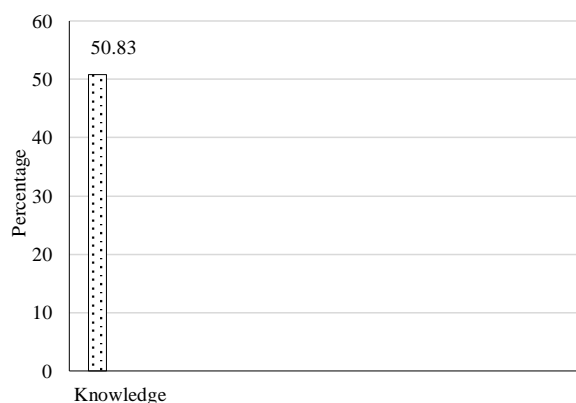


Figure 16. Percentage mean difference (Enhancement).

Section F: Association of Pretest and Post-test Knowledge Level Regarding MCH Package Services Among Adolescent Girls with Their Selected Demographic Variables

The Table 9 shows the association between pretest knowledge and demographic variables such as age, religion, educational status, family income, type of family, marital status, food habits, attended any program on MCH services, and source of information.

When considering the respondents age group, majority of the respondents (28) belongs to the age group of 15–16 years with the percentage of 35%, among 28 respondents 18 of them have < median value with the percentage of 37.5% and the remaining 10 respondents have > median value with the percentage of 31.25%. A total of 26 respondents belongs to the age group of 13–14 years with the percentage of 32.5%. Among 26 respondents 18 of them have < median value with the percentage of 37.5% and the remaining 8 respondents have > median value with the percentage of 25%. About 26 respondents belong to the age group of 17–18 years with the percentage of 32.5%. Among 26 respondents 12 of them have < median value with the percentage of 25% and the remaining 14 respondents have > median value with the percentage of 43.75%. The chi-square value for the age group is 2.756 and the p-value is $p > 0.05$ which is not significant at 5% level.

When considering the religion as demographic variable majority of the respondents (58) are Hindus with the percentage of 72.5%. Among 58 respondents, 35 have < median value with the percentage of

70% and the remaining 23 have > median value with the percentage of 76.67%. Six respondents are Muslims with the percentage of 7.5%. All the 6 respondents have < median value with the percentage of 12 %. Eight respondents are Christian with the percentage of 10%. Among 8 respondents, 6 have < median value with the percentage of 12% and the remaining 2 have > median value with the percentage of 6.67%. Eight respondents are other religion with the percentage of 10%. Among 8 respondents, 3 have < median value with the percentage of 6%and the remaining 5 have > median value with the percentage of 16.67%. The chi-square value for the religion is 6.38 and the p-value is $p > 0.05$ which is not significant at 5% level.

Table 9. Association between pretest knowledge level and demographic variables of adolescent girls.

S.N.	Demographic Variables	Characters	Sample		Knowledge				χ^2 -value	p-value
					≤ Median		>Median			
			No.	%	No	%	No	%		
1.	Age	13–14	26	32.5	18	37.5	8	25	2.756 df = 2, NS	P > 0.05
		15–16	28	35	18	37.5	10	31.25		
		17–18	26	32.5	12	25	14	43.75		
2.	Religion	Hindu	58	72.5	35	70	23	76.67	6.38, df = 3, NS	P > 0.05
		Muslim	6	7.5	6	12	0	0		
		Christian	8	10	6	12	2	6.67		
		Others	8	10	3	6	5	16.67		
3.	Educational status	Illiterate	0	0	0	0	0	0	23.16, df = 4, S	P < 0.05
		Informal education	2	2.5	0	0	2	6.45		
		Primary	21	26.25	18	36.73	3	9.6		
		Secondary	23	28.75	14	28.58	9	29.03		
		PUC	25	31.25	17	34.69	8	25.80		
		Degree	9	11.25	0	0	9	29.03		
4.	Family income	≤1000	4	5	2	4.17	2	6.25	1.55, df = 3, NS	P > 0.05
		1001–3000	19	23.75	12	25	7	21.87		
		3001–5000	30	37.5	20	41.6	10	31.25		
		5001 & above	27	33.75	14	29.16	13	40.62		
5.	Type of family	Nuclear	31	38.75	19	38.77	12	38.70	1.096, df = 2, NS	P > 0.05
		Joint	29	36.25	16	32.6	13	41.93		
		Extended	14	17.5	10	20.4	4	12.9		
		Single parent	6	7.5	4	8.16	2	6.45		
6.	Marital status	Married	12	15	5	10.64	7	21.21	1.6999, df = 1, NS	P > .05
		Unmarried	68	85	42	89.36	26	78.78		
7.	Food habits	Vegetarian	32	40	20	42.56	12	36.36	0.310, df = 1, NS	p>0.05
		Non vegetarian	48	60	27	57.44	21	63.63		
8.	Have you attended any MCH package services	Yes	8	10	2	4.25	6	18.18	Fisher's exact probability done 0.0595, NS	P > 0.05
		No	72	90	45	95.7	27	81.81		
9.	Source of information	Self-reading articles or journals or books	45	56.25	24	48.97	21	67.74	2.712, df = 1, NS	P > 0.05
		Mass media – T.V. or radio	35	43.75	25	51.02	10	32.25		

Note: S denotes significant at 5% level ($p > 0.05$) and NS – non-significant at 5% level ($p > 0.05$).

In educational status, majority (25) of the respondents are in PUC with the percentage of 31.25%. Among 25 respondents, 17 of them have < median value with the percentage of 34.69%, and the remaining 8 have > median value with the percentage of 25.8%. Two respondents are of informal

education with the percentage of 6.45%. About 21 respondents are in primary with the percentage of 26.25%. Among 21 respondents, 18 respondents of them have < median value with the percentage of 36.73% and the remaining 3 have > median value with the percentage of 36.73% and the remaining 3 have > median value with the percentage of 9.6%. A total of 23 respondents are in secondary with the percentage of 28.75%. Among 23 respondents, 14 respondents of them have < median value with the percentage of 28.58% and the remaining 9 have > median value with the percentage of 29.03%. 9 respondents are in degree with the percentage of 26.25% and they have > median value with the percentage of 29.03%. The chi-square value for the educational status is 23.16 and the p-value is $p > 0.05$ which is significant at 5% level.

The family income shows that the capacity of the respondents (30) belongs to the income of 3001–5000 with the percentage of 37.5%. Among 30 respondents 20 of them have < median value with the percentage of 41.6% and the remaining 10 respondents have > median value with the percentage of 31.25%. Four respondents belong to the income range of ≤ 1000 with the percentage of 4.17% and the remaining 2 respondents have > median value with the percentage of 6.25%. About 19 respondents belong to the income range of 1001–3000 with the percentage of 23.75%. Among 19 respondents, 12 of them have < median value with the percentage of 21.87%. Total 27 respondents belong to the income range of 5000 and above with the percentage of 33.75%. Among 27 respondents, 14 of them have < median value with the percentage of 40.62%. The chi-square value of the family income is 1.55 and the p-value is $p > 0.05$ which is not significant at 5% level.

Type of family indicates that 31 of the respondents are of nuclear family with 38.75% and among them, 16 have < median value with the percentage of 66.67% and the remaining 15 have > median value with the percentage of 36.58%. Total 29 of the respondents are of joint family with 36.25% and among them 14 have < median value with the percentage of 58.33% and the remaining 15 have > median with the percentage of 36.58%. About 14 of the respondents are of extended family with 38.75% and among them 7 have < median value with the percentage of 29.16% and the remaining 7 have > median value with the percentage of 17.07%. Six of the respondents are of single parent family with 75% and among them 2 have < median value with the percentage of 8.33% and the remaining 4 have > median value with the percentage of 9.7%. The chi-square value for the type of family is 0.22 and the p-value is $p > 0.05$ which is not significant at 5% level.

When considering the marital status, majority of the respondents (68) are unmarried with the percentage of 85%. Among 68 respondents, 42 of them have < median value with percentage of 89.36% and the remaining 26 have > median value with the percentage of 15%. Among 12 respondents, 5 of them have < median with the percentage of 1010.64% and the remaining have median value with the percentage of 21.21%. The chi-square value for the marital status is 1.699 and the p-value is $p > 0.05$ which is not significant at 5% level.

Regarding food habits, 32 respondents are vegetarian with the percentage of 40%. Among 32 respondents, 20 of them have < median value with the percentage of 42.56% and the remaining 12 have > median value with the percentage of 36.36%. Total 48 respondents are nonvegetarian with the percentage of 60%. Among 48 respondents 27 of them have < median with the percentage of 57.44% and remaining 21 respondents have > median value with the percentage of 63.63%. The chi square value for the food habits is 0.310 and the p-value is $p > 0.05$ which is not significant at 5% level.

When considering the adolescent girls who has attended and not attended any program on MCH package services, majority (72) of the respondents have not attended any program on MCH package services with the percentage of 90%. Among 72 respondents 45 of them have < median value with the percentage of 95.7% and the remaining 27 have > median value with the percentage of 81.81%. Eight respondents have attended MCH package services with the percentage of 10%. Among 8 respondents 5 of them have < median with the percentage of 12.82% and remaining 3 have respondents have

>median value with the percentage of 7.31%. The chi-square value for the adolescent girls who has attended and not attended any program on MCH package services is 0.477 and the p-value is $p > 0.05$ which is not significant at 5% level.

On the source of information 45 respondents had received the information from the self-reading articles or journals or the books with the percentage of 56.25%. Among 45 respondents, 23 of them have < median value with the percentage of 58.97% and the remaining 22 have > median value with the percentage of 53.65%. Total 35 respondents had received the information from mass media – TV or radio with the percentage of 43.75%. Among 35 respondents 16 of them have < median with the percentage of 41.02% and remaining 19 respondents have > median value with the percentage of 46.34%. The chi-square value for the source of information is 0.23 and the p-value is $p > 0.05$ which is not significant at 5% level.

The analysis revealed that there is an association between post-test knowledge level and educational status of adolescent girls regarding MCH package services. The remaining variables such as age, religion, family income, type of family, marital status, food habits, attended any program on MCH package services, and the source of information were found to be non-significant. Significant association was found between educational status with the chi-square value of 9.104 for df 4 at $p < 0.05$ level.

DISCUSSION

Results of the present study demonstrates the improvements in the knowledge of adolescent girls regarding MCH package services. In the study quasi experimental one group pretest and post-test design was used to test the effectiveness of STP. Adolescent girls were selected by using purposive sampling. Pretest was done prior to implementation of STP and the post-test data was collected after 7 days of implementation of STP by using the same self-administered questionnaire employed for pretest [7].

The pretest knowledge of adolescent girls regarding MCH package services reveals that out of 80 samples, 86% had inadequate knowledge, 13.75% had moderate knowledge, so there is a need for imparting knowledge to all young couples. STP was administered followed by assessing the post knowledge with the same structured knowledge questionnaire used during the pretest. The analysis showed that the mean post-test knowledge was increased from 20.42% to 71.25%. The result indicates that there is a significant improvement in the knowledge of adolescent girls regarding MCH package services. Hence, STP was effective. The pretest mean knowledge score is 8.58, mean percentage is 20.42% and standard deviation is 7.098. Post-test mean knowledge is found to be 29.93, mean percentage is 71.25% and SD is 5.87. Enhancement is 50.83% and statistical paired *t*-test value is 21.85. Findings show that there was a significant improvement in the knowledge on adolescent girls regarding MCH package services at 0.05 levels [8–10].

Further the analysis revealed that there is an association only between pretest knowledge level and educational status of adolescent girls regarding MCH package services. There is an association only between the post-test knowledge level and educational status of adolescent girls regarding MCH package services [11].

CONCLUSIONS

India has an excellent infrastructural layout for the delivery of MCH package services in the community through a network of subcentres, primary health centres, community health centres, district hospitals, state medical college hospitals and other hospitals in the public and private sectors. A massive expansion of MCH services has occurred at the sub district and the district levels. For proper program implementation, understanding community knowledge and practices regarding

maternal care during pregnancy, delivery, and postnatal period is required [9].

Awareness regarding MCH package services for the teenage girls plays a very important role in promoting MCH care. These services encompass the services such as antenatal care, skilled birth attendance, postnatal care, immunization, family planning, and nutritional needs. These services have the potential to reduce maternal and child mortality rates, easy access to the care facility, and motivates for the healthy behaviour. The study also emphasizes on the importance of community involvement and engaging in the delivery of MCH package services [10].

The findings of the study have implications in various nursing areas such as:

- *Nursing education:* The nursing personnels are challenging to provide standard and quality nursing care. The findings of this study have implications in various areas of nursing namely nursing education, nursing practice, nursing administration, and research.
- *Nursing education:* The nursing curriculum should consist of increased depth, content, and the activities which help to develop knowledge and skill among nurses in MCH Package services. As a nurse educator, there are an abundant opportunity for nursing professionals to educate adolescent girls as well as their family members regarding MCH Package services.
- *Nursing practice:* Nurses are the key persons of a health team, who play a major role in health promotion and maintenance. Nursing care is an art and science in providing, quality care. This study implies a basis for developing standards of care in the community as well as in the hospital. Since patient teaching is one of the functions of nursing personnel, its accountability should be stressed. Structured teaching program can be used as a teaching strategy in the community as well as in the hospital. Health education need to be through radio, television, documentary films, pamphlet, leaflets, etc.
- *Nursing administration:* The nurse administrator can take part in developing protocols and standing orders to design the health education program to update nursing personnel's knowledge regarding MCH Package services.
- *Nursing research:* The study helps the nurse researcher to develop appropriate health education tools for educating the adolescent girls regarding Maternal Health Package Services according to their demographic characteristics. The study will motivate the beginning researchers to conduct the same study with different variables on a large scale. The public and private agencies should also encourage research in this field through materials and funds.

Suggestion

Public awareness regarding MCH services shall be created by mass media such as newspaper, magazines, television, and internet and by conducting seminars, structured teaching program, and workshops.

Recommendations

- A similar study can be undertaken on large scale.
- An experimental study can be undertaken with a control group for an effective comparison of the results.
- A comparative study can be conducted between rural and urban settings.
- Manuals, information leaflets, and self-instructional modules may be developed at all dimensions and aspects regarding Maternal and Child Package services. A study can be carried out to evaluate the effectiveness of various teaching strategies like SIM, pamphlet, leaflet, video assisted teaching on Maternal and Childcare services.

Conflict of Interest

There is no conflict of interest for the present study.

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study.

Ethical Clearance

Permission to conduct study from ethical clearance committee was taken and written consent was taken from the study participants.

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